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Happy Birthday LSA!

Photos by H. Dean Chamberlain

It may seem like it started only yesterday, but the Sport Pilot/Light-Sport Aircraft rule (SP/LSA) celebrates its fifth "birthday" this summer. In many families, making a "how-tall-are-you-now" mark on the wall is a time-honored birthday tradition. In keeping with that concept, this article reviews and celebrates the mark SP/LSA has made since it joined the aviation family back in 2004.

My, How You've Grown!

In developing the SP/LSA rule, FAA's intent was to increase safety by closing gaps in existing regulations, accommodate advances in technology, provide for the manufacture of light-sport aircraft that are safe for their intended operations, and several other purposes. A key idea was to make it possible for more individuals to experience sport and recreational aviation in a manner that is not overly burdensome, but still safe.

Today, more than 2,000 individuals have earned sport pilot certificates, and numerous others have earned sport pilot privileges. Aircraft manufacturers have developed more than 90 new designs, and more than 800 factory-built special light-sport aircraft (SLSA) are recognized under the LSA rule. Many of these aircraft have high customer appeal designs and features that could inspire a new generation of pilots. In addition, many designs offer advanced safety features, including devices such as whole-plane emergency parachute systems, airbags, and single-button avionics that can automatically stabilize the aircraft.

FAA and ASTM

One of the reasons for this rapid growth is the LSA industry's use of industry consensus standards developed through ASTM International. This approach allows for more rapid design changes and also for quicker incorporation of changes and features resulting from safety findings. It is also consistent with a national policy that directs U.S. government agencies to use voluntary consensus standards in lieu of unique-to-government standards wherever possible. This practice helps eliminate the cost of developing separate government standards and decrease the cost and the burden of complying with agency regulation. FAA and industry will continue to develop and upgrade ASTM LSA standards as circumstances require.

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Because regulation of the LSA industry is so different, here's a quick review of how the

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consensus standards process works. It's important to understand that the industry has been asked to take more direct responsibility for developing and maintaining standards for design, manufacturing, and continued airworthiness. Industry chose ASTM International to facilitate the development of standards for LSA. ASTM established the F37 Committee on Light-Sport Aircraft in 2004. Any interested person can join the F37 Committee. Several FAA employees participate on the committee in the standards development process, but FAA has only one official voter. The Committee revises existing standards or develops new ones in response to demand, regulatory requirements, or ASTM protocols.

Here's where it gets a little tricky. ASTM provides its approved standards to FAA, but FAA does not "approve" ASTM standards. Rather, the agency "accepts" them and publishes its acceptance in the *Federal Register*. The agency also updates the LSA standards matrix on the FAA Web site's Light-sport Aircraft page.

A final point: ASTM standards are not regulations. However, SLSA are required to be manufactured in accordance with the accepted consensus standard. That means that the SLSA manufacturer must monitor and correct safety-of-flight issues through the issuance of safety directives. The manufacturer must also have a continued airworthiness system that meets the identified consensus standard. The owner or operator of an SLSA must comply with each safety directive applicable to the aircraft, unless he or she uses an acceptable alternative means of compliance or obtains an FAA waiver from the provisions of the safety directive.

The Safety Story

Many eyes are on the LSA industry's safety record, and a number of safety monitoring initiatives have been established. For example:

- NTSB's SLSA Team. In early 2008, the National Transportation Safety Board (NTSB) established a team to specifically examine the special light-sport aircraft industry, review its accident data, and identify potential safety issues or trends.
- FAA Data Analysis. In addition to coordinating with the NTSB, FAA conducts its own review of LSA-related safety data and takes action as needed. So far, FAA accident data indicate that in general, accident root causes are those common to other segments of general aviation (i.e., not unique to LSA).
- FAA LSA Assessment Project. Also underway is the agency's LSA assessment project, which started as a result of discussions at the 2008 Joint Experimental Aircraft Association (EAA)/FAA Recreational Aviation Summit.

Two of the project's three phases have been completed with data collected from 30 LSA manufacturers, distributors, and aircraft dealers. Preliminary results highlighted several areas for improvement and the LSA industry is working cooperatively with FAA to address the issues identified in the assessment project.

- Industry and Government. Another promising safety development is the February 2009 creation of an FAA/Industry LSA Joint Steering Group. The group's purpose is to address flight safety issues, certification standards, and accident causes. The group will release a charter defining its membership and an action plan at EAA AirVenture® this summer.

A Bright Future

More than ever, FAA is committed to LSA and has expanded its internal team to include members from the Aircraft Certification Service, the Flight Standards Service, Accident Investigation, and Aerospace Medicine to help manage the different areas associated with LSA. FAA shares the hope that the still-developing opportunities enabled by the SP/LSA rule will inspire a new generation of aviation enthusiasts.

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For More Information

FAA Accepted ASTM Consensus Standards
http://www.faa.gov/aircraft/gen_av/light_sport/media/standards_chart_v3.pdf

Light-Sport Aircraft Accepted Standards
http://www.faa.gov/aircraft/gen_av/light_sport/media/accepted_standards_v2.pdf

Light-Sport Program
www.faa.gov/aircraft/gen_av/light_sport/

ASTM F37 Committee on Light-sport Aircraft
www.astm.org/COMMIT/COMMITTEE/F37.htm

Definition of LSA – 14 CFR 1.1
Definition of S-LSA – 14 CFR 21.190
Definition of E-LSA – 14 CFR 21.191